



## **DUAL SURFACE MOUNT LOW LEAKAGE DIODE**

## **Features**

Surface Mount Package Ideally Suited for Automatic Insertion Very Low Leakage Current

Lead Free/RoHS Compliant (Note 3)

#### **Mechanical Data**

Case: SOT-23

Case Material: Molded Plastic. UL Flammability

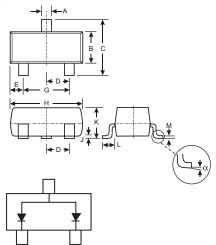
Classification Rating 94V-0

Moisture Sensitivity: Level 1 per J-STD-020C Terminals: Solderable per MIL-STD-202, Method 208

Lead Free Plating (Matte Tin Finish annealed over Alloy 42

leadframe).

Polarity: See Diagram Marking: K53, See Page 3 Ordering Information, See Page 3 Weight: 0.008 grams (approximate)



SOT-23									
Dim	Min	Max							
Α	0.37	0.51							
В	1.20	1.40							
С	2.30	2.50							
D	0.89	1.03							
E	0.45	0.60							
G	1.78	2.05							
Н	2.80	3.00							
J	0.013	0.10							
K	0.903	1.10							
L	0.45	0.61							
М	0.085	0.180							
0 8									
All Din	nensions	in mm							

## Maximum Ratings @ TA = 25 C unless otherwise specified

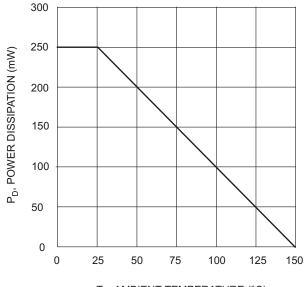
Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>R</sub> WM V <sub>R</sub>	85	٧
RMS Reverse Voltage	$V_{R(RMS)}$	60	V
Forward Continuous Current Single diode (Note 2) Double diode	I <sub>FM</sub>	160 140	mA
Repetitive Peak Forward Current (Note 2)	I <sub>FRM</sub>	500	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0ms @ t = 1.0s	I <sub>FSM</sub>	4.0 1.0 0.5	А
Power Dissipation (Note 2)	P <sub>d</sub>	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>JA</sub>	500	C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150	С

## Electrical Characteristics @ TA = 25 C unless otherwise specified

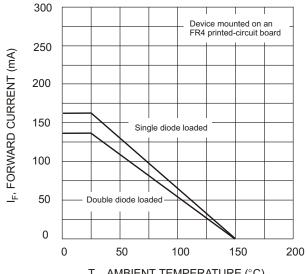
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition	
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	85			V	I <sub>R</sub> = 100 A	
Forward Voltage	V <sub>F</sub>			0.90 1.0 1.1 1.25	V	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 50mA I <sub>F</sub> = 150mA	
Leakage Current (Note 1)	IR			5.0 80	nA nA	V <sub>R</sub> = 75V V <sub>R</sub> = 75V, T <sub>j</sub> = 150 C	
Total Capacitance	Ст		3		pF	V <sub>R</sub> = 0, f = 1.0MHz	
Reverse Recovery Time	t <sub>rr</sub>			3.0	s	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100$	

- 1. Short duration test pulse to minimize self-heating effect.
- 2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
- 3. No purposefully added lead.

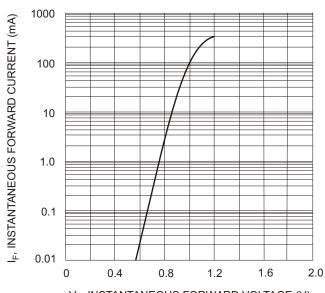




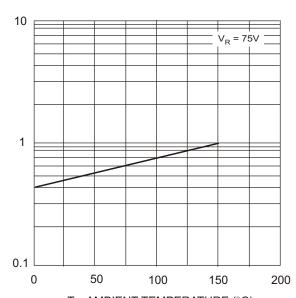
T<sub>A</sub>, AMBIENT TEMPERATURE (°C) Fig. 1 Power Derating Curve



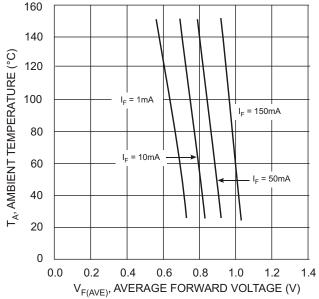
T<sub>A</sub>, AMBIENT TEMPERATURE (°C) Fig. 2 Current Derating Curve



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 3 Typical Forward Characteristics



T<sub>A</sub>, AMBIENT TEMPERATURE (°C) Fig. 4 Typical Reverse Characteristics



IR, REVERSE CURRENT (nA)

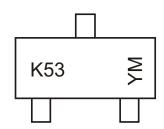


# Ordering Information (Note 4)

Device	Packaging	Shipping		
BAW156-7-F	SOT-23	3000/Tape & Reel		

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

# **Marking Information**



K53 = Product Type Marking Code YM = Date Code Marking Y = Year ex: N = 2002 M = Month ex: 9 = September

#### Date Code Key

	Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ſ	Code	J	K	L	М	N	Р	R	S	Т	U	V	W

Year	2010	2011	2012		
Code	Х	Υ	Z		

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

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